

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 04 JUL 2006

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Applicant's or agent's file reference ECIP/A037/WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/IL2005/000189	International filing date (day/month/year) 15.02.2005	Priority date (day/month/year) 01.03.2004
International Patent Classification (IPC) or both national classification and IPC INV. H04Q11/04		
Applicant ECI TELECOM LTD. et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 7 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 3 sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☒ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 28.09.2005	Date of completion of this report 30.06.2006
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Gijsels, W Telephone No. +31 70 340-4126 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IL2005/000189

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-17 as originally filed

Claims, Numbers

18-25 as originally filed

1-17 filed with telefax on 28.09.2005

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

see separate sheet

6. Additional observations, if necessary:

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

see separate sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 1-4,7-9,10-14,19,20 .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-4,7-9,10,11,19,20
	No: Claims	12-14
Inventive step (IS)	Yes: Claims	1-4,7-9,10,11,19,20
	No: Claims	12-14
Industrial applicability (IA)	Yes: Claims	1-4,7-9,10-14,19,20
	No: Claims	

**INTERNATIONAL PRELIMINARY
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2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IL2005/000189

Re Item I

Basis of the report

The present application does not meet the requirements of Article 34(2)(b) PCT: some amendments made by the Applicant to claims 1 ("permanent"), 10 ("constant") and 12 ("constantly") go beyond the disclosure in the international application as filed, as they are not directly and unambiguously derivable from what is previously presented in the application (see the PCT Guidelines, IV, 7.9).

As a consequence, this report is established as if said amendments had not been made (Rule 70.2(c) PCT).

Re Item IV

Lack of unity of invention

The search examiner distinguishes the following subjects and the groups of claims containing them:

1. Subject 1: claims 1-4,7-9,10-14,19,20
2. Subject 2: claims 5,6,15-18,21-25

Subject 1 (searched): claims 1-4,7-9,10-14,19,20:

Method and apparatus to determine a minimal default technology; uniform communication devices providing each of the subscribers, irrespective of its individual agreement reached with a service provider, an individual communication link for supplying broadband communication services by using said minimal default technology or a more advanced broadband technology.

Subject 2 (not searched): claims 5,6,15-18,21-25:

Method, apparatus and system using a service filtering means to prevent the use by a narrowband subscriber of communication services not included in an arrangement with a service provider.

No special technical features are available by means of which a relationship could be established between the subject-matter as defined in the two groups of inventions mentioned above.

Consequently, neither the objective problems underlying the subject-matter of the two claimed inventions, nor their solutions as defined by the special technical features described above allow for the link of a single general inventive concept to be established between the said inventions.

The application hence does not meet the requirements of unity of invention as defined in Rule 13.1 and 13.2 PCT.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Claim 1

The document D1 represents the **closest prior art** and discloses a method of providing subscribers with communication services in accordance with their agreements with a service provider.

The subject-matter of claim 1 **differs from D1** in that it does not disclose the method steps of: determining an advanced broadband technology to be produced by a distribution unit as a minimal default technology; uniform communication devices in the distribution unit providing each of the subscribers, irrespective of its individual agreement reached with the service provider, an individual communication link for supplying broadband communication services by using said minimal default technology or a more advanced broadband technology.

This has the **advantage** of avoiding a variety of different communication devices as well as selective interconnections at the distribution unit.

The **problem** to be solved by the present invention may therefore be regarded as how to avoid having to determine, at time of installation, a ratio of broadband and narrowband communication devices in the distribution unit; and having to rewire them afterwards.

The **solution** to this problem as defined in claim 1 of the present application is considered to involve an inventive step (Article 33(3) PCT).

Thus, the requirements (Article 33(1) PCT) of **novelty** (Article 33(2) PCT), **inventive step** (Article 33(3) PCT) and **industrial applicability** (Article 33(4) PCT) are all met.

Claims 2-4,7-9

Claims 2-4,7-9 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Claim 10

Independent claim 10 defines an apparatus that corresponds to the method defined by the combination of the features of claim 1. Therefore, by the same reasoning as explained above, the requirements (Article 33(1) PCT) of novelty (Article 33(2) PCT), inventive step (Article 33(3) PCT) and industrial applicability (Article 33(4) PCT) are all met.

Claims 11,19,20

Claims 11,19,20 are dependent on claim 10 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Claim 12

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 12 is not new in the sense of Article 33(2) and Rule 64.1 PCT.

Document D1 discloses (the references in parenthesis applying to this document) a communication service distribution unit for use in a converged narrowband and broadband access network (column 2, lines 9-11), comprising at least one communication device capable of providing a broadband communication service and associated with a narrowband subscriber (column 2, lines 28-31).

Claims 13,14

Dependent claims 13,14 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

Claims:

1. A method of providing subscribers with communication services in accordance with their agreements with a service provider, the method
5 comprises:

determining a first plurality of subscribers to be connected to the service provider via a distribution unit located in an access network;

determining an advanced broadband technology to be produced by the distribution unit as a minimal default technology (DABT);

10 in the distribution unit, arranging a second plurality of substantially uniform communication devices for serving the first plurality of subscribers, and providing for each of said subscribers, irrespective of its individual agreement reached with the service provider, an individual permanent communication link for supplying, from one of the
15 communication devices, broadband communication services by using said DABT or a more advanced broadband technology, and

enabling each of the plurality of subscribers to receive services in accordance with their respective agreements with the service provider.

2. The method according to Claim 1, wherein said DABT is VDSL
20 (Very high data rate Digital Subscriber Line).

3. The method according to Claim 1 or 2, wherein at least one of the subscribers is entitled to narrowband services only.

4. The method according to any one of the preceding claims, further comprising preventing the use, by a particular subscriber, of
25 communication services not included in the agreement between said particular subscriber and the service provider.

5. A method of providing a narrowband subscriber with communication services in a converged broadband and narrowband communications access network, the method comprises establishing for

said narrowband subscriber a communication link capable of carrying broadband communication services, while preventing the use by said subscriber of all communication services not included in an agreement
5 between said subscriber and a service provider.

6. The method according to Claim 5, wherein said communication link is being established between the narrowband subscriber and a communication device installed in a distribution unit and supporting said broadband communication services.

10 7. The method according to Claim 4 or 6, wherein said preventing is performed by remotely configuring the communication device located at the distribution unit and associated with said particular subscriber, where the configuration is carried out from a Local Exchange connected to the distribution unit.

15 8. The method according to Claim 4, 5, 6 or 7, wherein said preventing is performed by providing at least one of the subscribers with a Customer Premises Equipment (CPE) unit specifically configured to provide only services in accordance with the subscriber's agreement with the service provider.

20 9. The method according to Claim 7 or 8, further comprising a step of reconfiguring according to an updated subscriber's agreement with the service provider.

10. A communication service distribution unit for use in a converged broadband and narrowband access network, comprising a first plurality
25 of substantially uniform communication devices for serving a second plurality of subscribers associated with the distribution unit, wherein each of said communication devices being adapted to provide to its corresponding subscriber either a technologically advanced broadband communication service as a minimal default communication service, or a

more advanced broadband communication service via a permanent individual communication link, and wherein said subscribers include at least one narrowband subscriber.

11. The distribution unit according to Claim 10, adapted to provide a more
5 technologically advanced communication service to a limited number of the subscribers.

12. A communication service distribution unit for use in a converged narrowband and broadband access network, comprising at least one communication device capable of providing a broadband communication
10 service, said at least one communication device being permanently associated with a narrowband subscriber.

13. The distribution unit according to any one of the preceding claims, wherein said broadband communication service is a technologically advanced type of communication service selected from a non-exhaustive list comprising:
15 ADSL (Asymmetrical Digital Subscriber Line), VDSL (Very high data rate DSL), SHDSL (Single line High bit-rate DSL).

14. The distribution unit according to any one of Claims 10 to 13, comprising a plurality of communication devices capable of providing one and the same technologically advanced broadband communication service to all
20 broadband and narrowband subscribers associated with the unit.

15. A service filtering means operative to derive, from a technologically advanced broadband communication service reserved for a particular subscriber at a distribution unit in an access network, only communication services agreed between said particular subscriber and a service provider.

25 16. The service filtering means according to Claim 15, being configurable.

17. The service filtering means according to Claim 16, remotely configurable and associated with a communication device providing said broadband communication service at the distribution unit.